



RocketU 1144B / RocketU 1142A

Host Controller

USB 3.0 Host Adapters

User's Guide

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HighPoint Technologies, Inc.

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Table of Contents

1 Features and Specifications	4
2 Physical Specifications.....	5
3 Kit Contents	6
4 Hardware Description and Installation.....	7
4.1 RocketU 1144B / 1142A Host Adapter Board Layout	7
4.2 Installing the RocketU 1144B / 1142A Host Adapter	7
4.3 Using the 19PIN USB 3.0 Front Panel Port of the RocketU 1142A.....	7
5 RocketU Series Host Adapter Driver Installation	9
5.1 Driver Installation - Microsoft Windows	9
5.2 Verify Installation of the Software - Microsoft Windows	10
5.3 Driver installation -Linux.....	11
6 Connect Hard Disk to RocketU 1144B / 1142A Host Adapter.....	13
7 Firmware Update	14
8 Thank You	15
9 Customer Support	16

HighPoint RocketU 1144B/ 1142A

Highpoint Second Generation USB 3.0 HBA's - Dedicated 5Gb/s per-port technology with robust transfer performance and improved energy efficiency

The RocketU 1144B is the industry's fastest USB 3.0 HBA – each dedicated USB 3.0 port supports transfer speeds up to 5Gb/s, for a combined bandwidth of up to 20Gb/s; perfect for today's fastest SATA 6Gb/s SSD's and hard drives.

1 Features and Specifications

Host Adapter Architecture

- PCI-Express 2.0 x4
- Total Transfer Bandwidth up to 20Gb/s
- Four dedicated 5Gb/s Super Speed USB 3.0 type-A ports (RocketU 1144B)
- Two Super Speed USB 3.0 type-A ports and one 10Gb/s Internal USB 3.0 Front Panel Port (RocketU 1142A)
- Optimized for external USB drives and drive enclosures
- Backwards compatible with USB 2.0 & 1.1
- Compliant with xHCI (Extensible Host Controller Interface) spec.
- Low Profile (RocketU 1142A only)
- Hot Swap and hot plug
- RoHS compliant

Operating System Support

- Windows Vista, Windows 2008, Windows 7 & 8 (32 and 64-bit versions)
- Linux OS support with xHCI driver of Kernel v2.6.31 or later

Note: *xHCI is a computer interface specification that defines a register-level description of a Host Controller for Universal Serial bus (USB), which is capable of interfacing to USB 1.0, 2.0, and 3.0 compatible devices. The specification is also referred to as the USB 3.0 Host Controller specification.*

2 Physical Specifications

Host Adapter Dimensions:

Size: 96mm x 95.0mm x 19mm

EMI: FCC Part 15 Class B and CE

Thermal and Atmospheric Characteristics:

Work Temperature Range: +5 ~ +55 °C

Relative Humidity Range: 5% ~ 60% non-condensing

Storage Temperature: -20 ~ +80 °C

MTBF: 920,585 Hours

Electrical Characteristics:

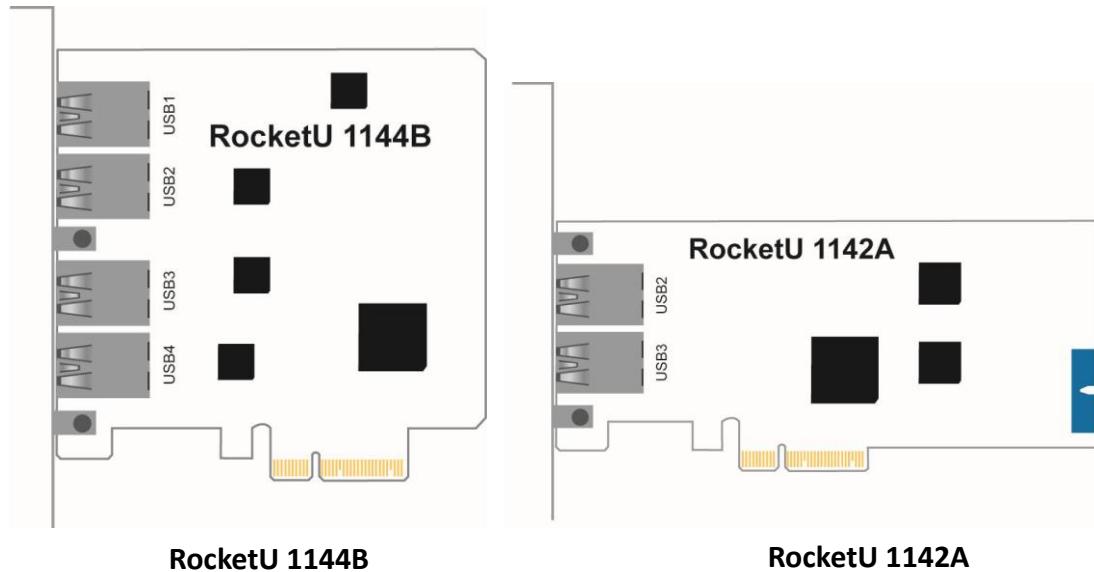
PCI-E	3.3V	12V
Power	4W max	1W max

3 Kit Contents

- RocketU 1144B USB 3.0 HBA / RocketU 1142A USB 3.0 HBA
- Low Profile Bracket (RocketU 1142A only)
- CD (Driver Software)
- Quick Installation Guide

4 Hardware Description and Installation

4.1 RocketU 1144B / 1142A Host Adapter Board Layout



4.2 Installing the RocketU 1144B / 1142A Host Adapter

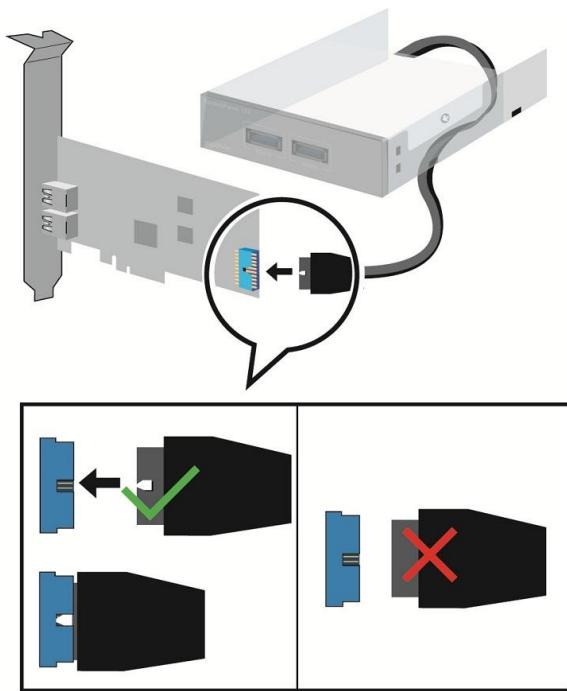
Note: Make sure the system is powered-off before installing the RocketU host adapter.

1. Open the system chassis.
2. Locate an unused PCI-Express $\times 4$ ($\times 8$, $\times 16$) slot.
3. Remove the PCI-Express slot cover.
4. Gently insert the RU series into the PCI-Express slot, and secure the bracket to the system chassis.
5. After installing the adapter, attach the hard disks or disk enclosure to the RU series card using the USB cables.
6. Close and secure the system chassis.

4.3 Using the 19PIN USB 3.0 Front Panel Port of the RocketU 1142A

The RocketU 1142A provides standardized USB 3.0 front panel support. It is compatible with any standard USB 3.0 front panel device such as the RocketPanel Series USB 3.0 front panel adapter or the USB 3.0 all in one card reader front panel adapters.

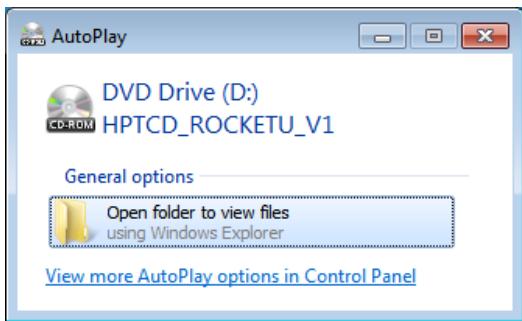
Note: Make sure the system is powered-off before installing the USB 3.0 Front Panel device.



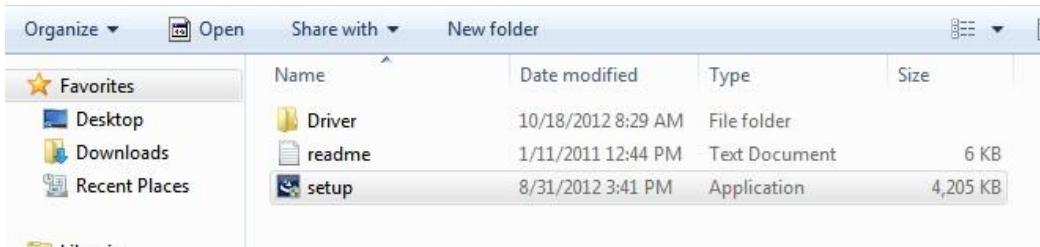
5 RocketU Series Host Adapter Driver Installation

5.1 Driver Installation - Microsoft Windows

1. Insert the HighPoint Software CD to the CD/DVD drive.
2. CD will automatically run. Please see the following picture.



3. Or you can browse the software CD folder:
\RocketU\RU1022A_114X\Windows



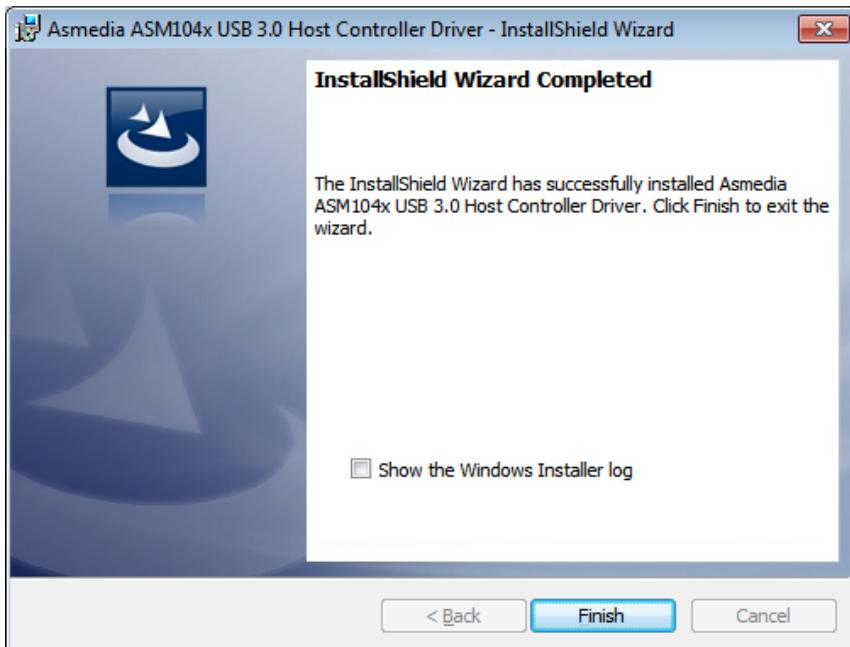
Double click the "setup.exe" and follow the setup wizard steps to install the ASMedia ASM1042x USB 3.0 Host controller driver.



Note: ASMedia ASM1042x don't support the way by which Device Manager → Update the driver

software. You can only follow up the above processes to install the driver.

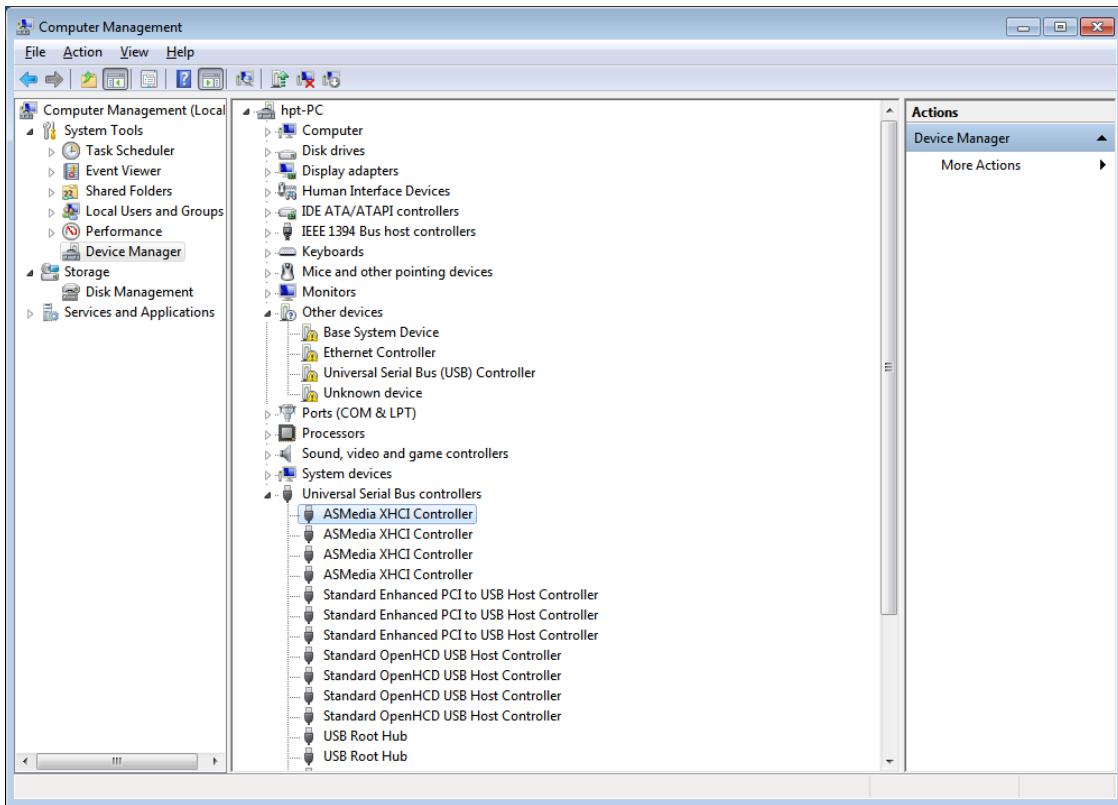
4. Click Finish to exit the wizard when you has successfully installed driver.



Note: ASMedia ASM1042x driver was embedded into Windows 8 OS. That's, the driver can be installed into Windows8 automatically.

5.2 Verify Installation of the Software - Microsoft Windows

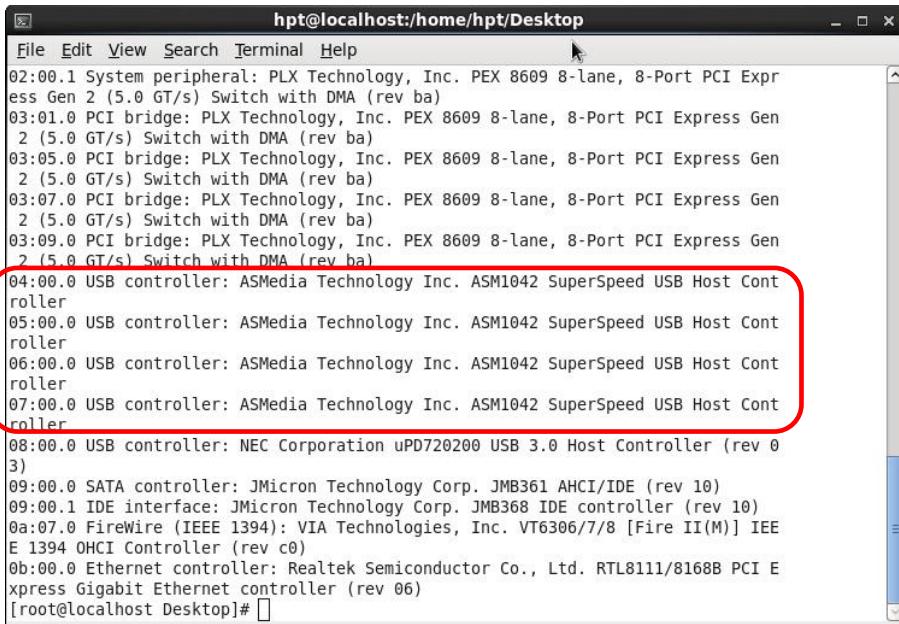
1. On the Start menu, select 'Control Panel'.
2. Open on the 'System' applet (you may first have to select 'Switch to Classic View').
3. Select the 'Hardware' tab.
4. Select the 'Device Manager' button.
5. Expand the 'Universal Serial Bus Controllers' entry. You can see four 'ASMedia xHCI Controller'.



5.3 Driver installation -Linux

HighPoint RocketU 1144B / 1142A Host adapter support the xHCI specification. Linux OS supports with xHCI driver of Kernel v2.6.31 or later. That's, the driver can be installed into Linux OS automatically.

1. You can see the following information after Linux OS install the driver for RocketU 1144B / 1142A Host Adapter normally.

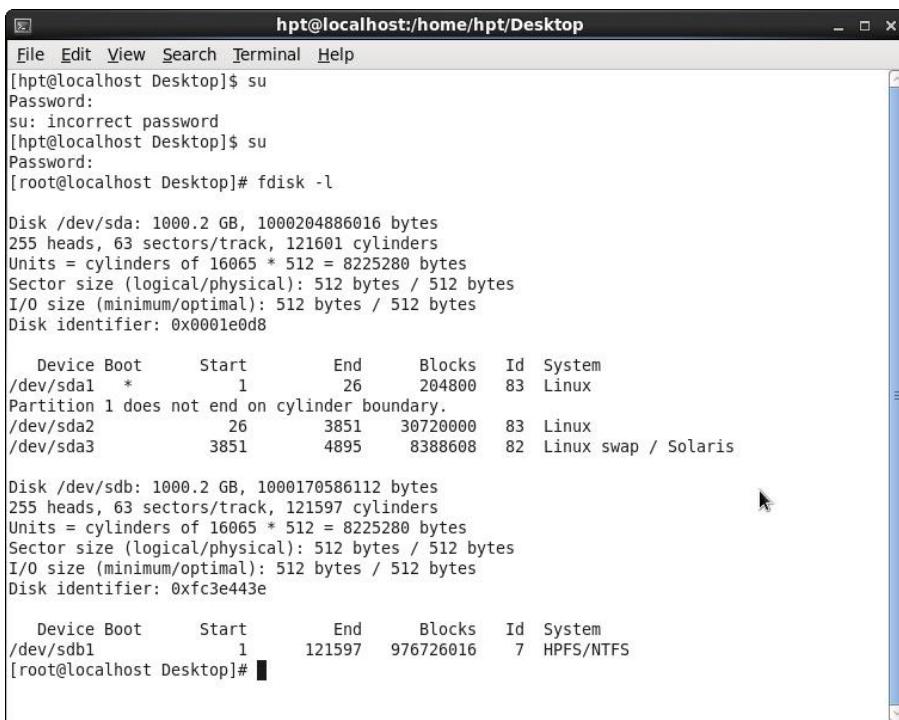


```

hpt@localhost:~$ lsusb
[Output]
02:00.1 System peripheral: PLX Technology, Inc. PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA (rev ba)
03:01.0 PCI bridge: PLX Technology, Inc. PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA (rev ba)
03:05.0 PCI bridge: PLX Technology, Inc. PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA (rev ba)
03:07.0 PCI bridge: PLX Technology, Inc. PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA (rev ba)
03:09.0 PCI bridge: PLX Technology, Inc. PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA (rev ba)
04:00.0 USB controller: ASMedia Technology Inc. ASM1042 SuperSpeed USB Host Controller
05:00.0 USB controller: ASMedia Technology Inc. ASM1042 SuperSpeed USB Host Controller
06:00.0 USB controller: ASMedia Technology Inc. ASM1042 SuperSpeed USB Host Controller
07:00.0 USB controller: ASMedia Technology Inc. ASM1042 SuperSpeed USB Host Controller
08:00.0 USB controller: NEC Corporation uPD720200 USB 3.0 Host Controller (rev 03)
09:00.0 SATA controller: JMicron Technology Corp. JMB361 AHCI/IDE (rev 10)
09:00.1 IDE interface: JMicron Technology Corp. JMB368 IDE controller (rev 10)
0a:07.0 FireWire (IEEE 1394): VIA Technologies, Inc. VT6306/7/8 [Fire II(M)] IEEE 1394 OHCI Controller (rev c0)
0b:00.0 Ethernet controller: Realtek Semiconductor Co., Ltd. RTL8111/8168B PCI Express Gigabit Ethernet controller (rev 06)
[root@localhost Desktop]#

```

2. If attached the hard disk with the RocketU 1144B / 1142A Host Adapter, you can see sdb information in the system.



```

hpt@localhost:~$ su
[htp@localhost Desktop]$ su
Password:
su: incorrect password
[htp@localhost Desktop]$ su
Password:
[root@localhost Desktop]# fdisk -l

Disk /dev/sda: 1000.2 GB, 1000204886016 bytes
255 heads, 63 sectors/track, 121601 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x0001e0d8

      Device Boot      Start        End      Blocks   Id  System
/dev/sda1   *          1         26     204800   83  Linux
Partition 1 does not end on cylinder boundary.
/dev/sda2            26        3851   30720000   83  Linux
/dev/sda3        3851        4895    8388608   82  Linux swap / Solaris

Disk /dev/sdb: 1000.2 GB, 1000170586112 bytes
255 heads, 63 sectors/track, 121597 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0xfc3e443e

      Device Boot      Start        End      Blocks   Id  System
/dev/sdb1            1       121597    976726016    7  HPFS/NTFS
[root@localhost Desktop]#

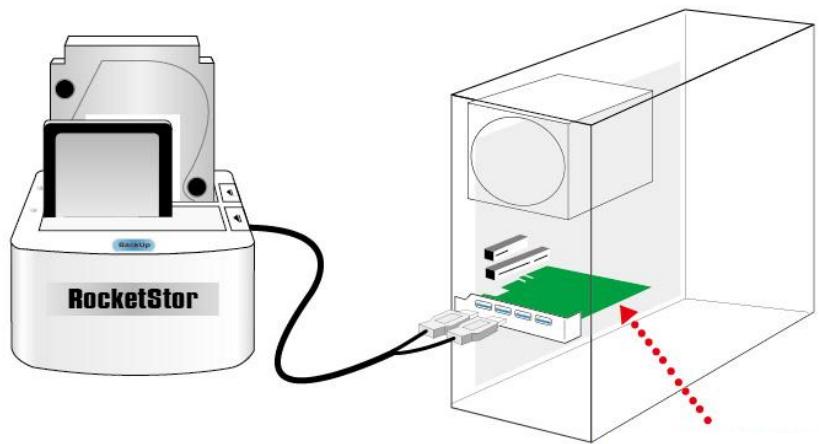
```

6 Connect Hard Disk to RocketU 1144B / 1142A Host Adapter

Connect the hard disk to RocketU 1144B / 1142A, please use USB 3.0 Dock or enclosure.

HighPoint RocketStor offers two device bays. This innovative dual-5Gb/s bay architecture provides an unprecedented level of transfer bandwidth for a USB-based storage solution, delivering the fastest SATA 6G performance possible through USB 3.0 connectivity.

1. Make sure the RocketU 1144B / RocketU 1142A has been installed into your PC.
2. Connect the enclosure or hard disk to the RocketU 1144B / RocketU 1142A HBA with USB 3.0 cables.
3. Allow the drives/enclosure to spin up for a few moments. Once the devices are ready, they will be recognized by the operating system and can be accessed as needed



RocketU 1144B

7 Firmware Update

RocketU 1144B / 1142A Host Adapter has the firmware. The firmware update utility must run under the pure DOS environment. It cannot run in a DOS box on Windows system.

1. Go to www.highpoint-tech.com website to download the latest firmware.
2. Extract the package.
3. Under boot from a bootable USB drive.
4. Go to the folder of firmware.

```
[2680]      [MARVELL]      [EJ220]      [2740]
      14 file(s)    688,760,603 bytes
      75 dir(s)      717 Mega bytes free

C:\>cd fw1222OE

C:\FW1222OE>dir
 Volume in drive C is LYX
 Volume Serial Number is 4E38-AC42

 Directory of C:\FW1222OE

.
..
104XFW  CFG      530  02-20-12 10:25a
104XFWDL EXE    71,360  09-19-11 10:42a
1222_OE BIN    65,536  02-14-12  3:00p
D  BAT      15  08-31-10  4:04p
DOS4GW  EXE    265,396  07-03-07 12:38p
README  TXT      597  04-20-12  2:59p
U  BAT      27  02-14-12  3:02p
7 file(s)    403,461 bytes
2 dir(s)      717 Mega bytes free

C:\FW1222OE>
```

5. The following command line is used to launch the flash utility:
104xfwdl.exe /u 1222_OE.bin
or use the Batch Files:
u.bat
6. After the update successfully, you can see the following information.

```
SPI ROM, vendor[WinBond], device id[W25X40Bx]
Current   : 111222_0e_02_5e
Update to : 111222_0e_02_5e
(SVID:SSID = 0x174c:0x2104)
Start to update firmware...
Update Section 1 Done
Verify Section 1 OK
| Update Section 2 Done
Verify Section 2 OK

4 > Bus:0x07 Device:0x00 Function:0x00

SPI ROM, vendor[WinBond], device id[W25X40Bx]
Current   : 111222_0e_02_5e
Update to : 111222_0e_02_5e
(SVID:SSID = 0x174c:0x2104)
Start to update firmware...
Update Section 1 Done
Verify Section 1 OK
| Update Section 2 Done
Verify Section 2 OK

update successfully completed !!!

C:\FW1222OE>
```

8 Thank You

Thank you for purchasing the RocketU 1144B / 1142A Host adapter. We appreciate your support, and welcome any questions, comments or product suggestions you may have.

9 Customer Support

If you encounter any problems while utilizing RocketU series Host Adapters, or have any questions about this or any other HighPoint Technologies, Inc. product, feel free to contact our Customer Support Department.

HighPoint Technologies, Inc. websites:

<http://www.highpoint-tech.com/>

Web Support:

<http://www.highpoint-tech.com/websupport/>